The Massachusetts Plan for Nonsmoking and Health

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The Massachusetts Department of Public Health

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Report and Recommendations of the
Advisory Committee on Smoking or Health
of the
Office for Nonsmoking and Health
Massachusetts Department of Public Health

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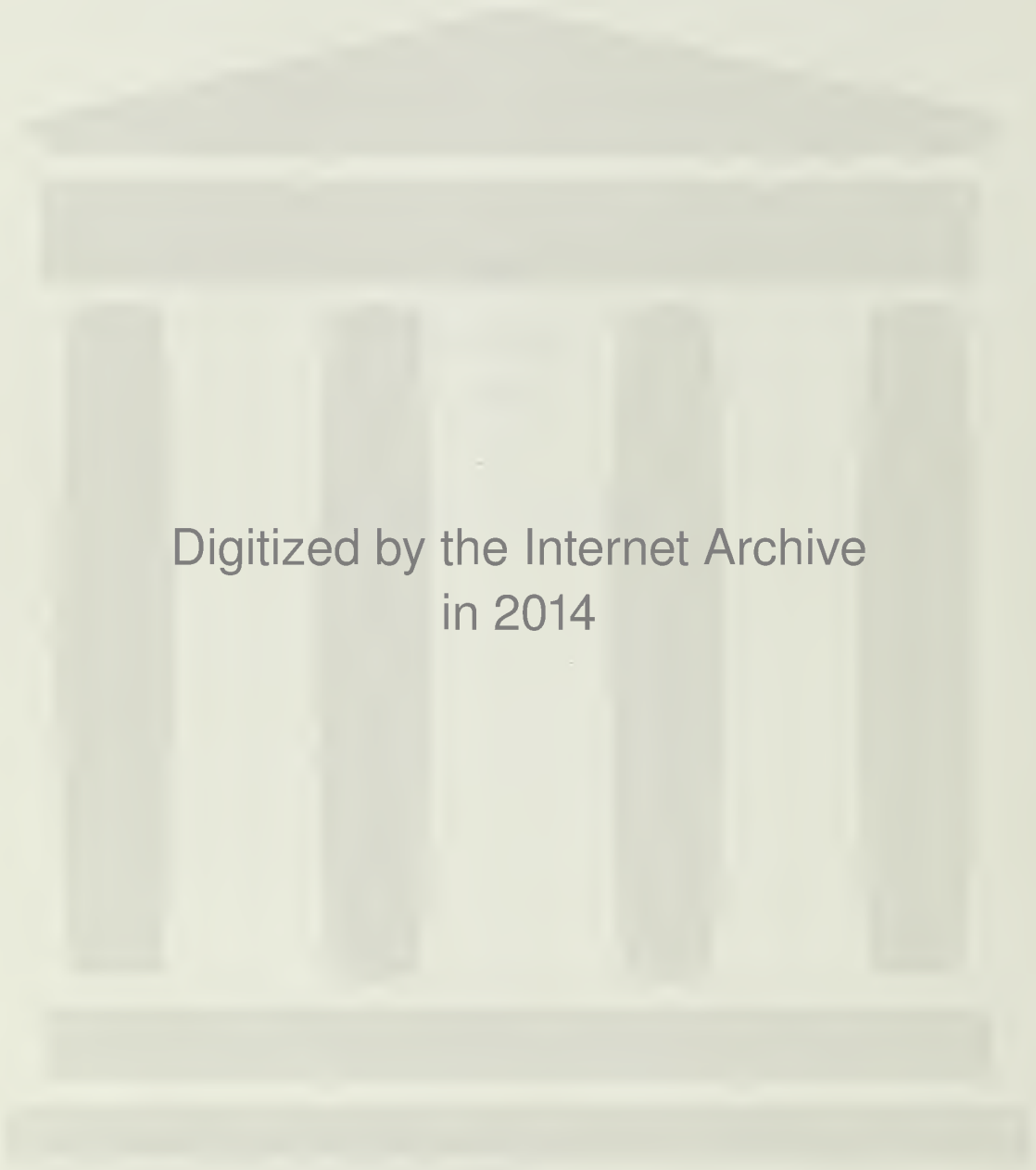

Executive Summary

Cigarette smoking is the leading cause of preventable death and disease in Massachusetts resulting in 8,500 deaths each year. Smoking also places a heavy economic burden on the state's economy as evidenced by the following statistics.

- Deaths from smoking result in 87,000 years of potential life lost with $452 million in lost wages.
- Costs of caring for smoking related illnesses are estimated to be $847 million per year.
- Illness and disability costs are estimated at $288 million per year.

Despite these compelling statistics 27% of all Massachusetts adults (1.2 million persons) smoke. Each year they consume in excess of 1.4 billion cigarettes. Put end to end these cigarettes would circle the globe 24 times. Tobacco manufacturers refuse to acknowledge that their products cause disease and operate aggressive marketing programs throughout the state to dissuade smokers from quitting and encourage young persons to take up the practice.

More than $50 million is spent each year in Massachusetts for cigarette advertising and promotions. Of particular concern is the targeting of low income persons, minorities and young females. Based on current adolescent smoking rates, of all the children alive in the state today more than a 100,000 will eventually be killed by the cigarette.

It has been 25 years since the first Surgeon General's Report on Smoking and Health. Since that time, researchers from Massachusetts universities, teaching hospitals, and other institutions have made important scientific findings on the health effects of tobacco. The state's voluntary health associations and professional organizations have worked diligently to educate the public about the hazards of smoking and to help interested persons quit. In recent years, expert centers such as the Tobacco Liability Project at Northeastern University have been established to deal with the complex issues

of tobacco control. Public opinion has also changed due in large part to citizens' advocacy groups that have effectively lobbied at the local and state level for smoke-free air in public places. However, these groups have worked independently. The time has come for Massachusetts to pool these resources together to address the smoking problem.

In the Spring of 1987, the Massachusetts Department of Public Health called together the various interested groups with the intent of developing a common set of goals and strategies for tobacco control. A planning committee was formed and chose three areas of action: the prevention of adolescent tobacco use; cessation of adult smoking; and protection of the health of nonsmokers from the adverse effects of tobacco smoke. Following a conference in July of 1987 at which expert papers were presented on a broad range of tobacco issues, three subcommittees were established, one for each specific area. The following document is the culmination of their work. The committees began by selecting a common set of goals and objectives. They are:

By the year 2,000 more than 90% of adults and adolescents in Massachusetts will be nonusers of tobacco.

- By the year 1995, more than 90% of all females of childbearing age will be nonusers of tobacco.
- By the year 1995, more than 85% of low income adults will be nonusers of tobacco.
- By the year 1995, less than 10% of adults will be heavy smokers.

By the year 2,000 all Massachusetts nonsmokers should be able in the course of their normal daily activities to breathe air that is free of environmental tobacco smoke.

- By the year 1995, all Massachusetts schools, public places and health care facilities should be smoke free.

- By the year 1995, all Massachusetts businesses should be smoke free except for designated areas.

To realize these objectives specific actions are recommended. Educational efforts must be expanded so that children are warned of the dangers of tobacco use from the time they first enter school to graduation. A mass media campaign is needed to counter the ubiquitous advertising of cigarettes.

All adults who smoke should have ready access to tobacco cessation services, in particular those individuals who are enrolled in state funded human service programs. Health providers should make smoking cessation the number one health priority for patients who smoke. Special emphasis should be given to pregnant females, low income persons and heavy smokers.

New legislation is needed to prevent adolescents from purchasing tobacco and to limit advertising and promotion of this harmful substance. Free sampling, event sponsorship and billboard advertising of tobacco products should be banned. Schools, health facilities and public places should be made smoke free and businesses should allow the practice only in specially designated areas.

Achieving a smoke free Massachusetts does not require new biomedical technology. The methods exist. What is needed is commitment and comprehensive action by all groups involved to eliminate tobacco use and in doing make Massachusetts the health care state in the nation.

II. Introduction

This is a plan to aid the citizens of Massachusetts in order to improve vital organ function, suffer less and live longer. When the goals of this plan are reached, medical care costs will plummet. Home and workplace fires will also be greatly reduced. The economy will be improved.

The timing is right to accomplish the vision of this plan. It involves a long battle, now recently snowballing, that has been waged against tobacco use. Almost half a century ago, overwhelming proof of cigarette diseases was established. First came chronic bronchitis, emphysema and cancer, then heart and blood vessel damage, then strokes and birth defects. Within the past decade there has been substantial evidence that secondhand smoke in home and workplace punished adult nonsmokers and infants. Finally, the fact that nicotine is a drug as addictive as cocaine or heroin was established.

The tobacco industry officials still proclaim that the pleasure in the use of their product outweighs any possible ill effects. They out spend other industries with advertising. Their product is dishonestly portrayed to the consumer; as one equated with the glamorous, healthy, outdoor life and pleasure. They sponsor sports events. They recruit new customers by focusing on teenagers.

Against the "Merchants of Death" in the tobacco war is a poorly-financed army of determined individuals, health officials, and organizations. At first it was a David against Goliath fight. The war of this half century was started by a few surgeons who opened the chest and witnessed the damaged lung. They were soon joined by public health officials and lay organizations formed to fight cancer, heart disease, and other lung disease (emphysema). Finally, groups were formed to advocate clear air in the workplace and home. The explosion of physical fitness programs in offices and factories, jogging and participation in outdoor sports have helped swell the antitobacco army.

Prevention via education is the keynote of this effort. Many adults have gotten the message but it is imperative that children and teenagers should quit, or better, not start. This plan for a smoke-free Massachusetts includes suggestions for a do-it-yourself quitting program not for people but for a society that values the health and well-being of its citizens. Like a self-help guide, this plan offers step by step recommendations for making the Commonwealth tobacco free.

Quitting is difficult, and this plan will be a challenge to leaders in our society that have accepted tobacco use as an inevitable societal addiction. It is directed primarily to legislators, health-care workers, sports idols, teachers, social workers and parents. Whether its goals are reached or not, the plan can serve as a model for citizens of other states and for federal government officials. The ultimate goal is a smoke-free and healthier America.

Richard D. Overholt, M.D.

Since the 1930s Dr. Overholt has pioneered efforts in Massachusetts to curb smoking. At age 86, he still finds time from his practice of medicine to address the tobacco problem.

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I. DESCRIPTION OF THE PROBLEM

A. Historical Perspective

Tobacco use in the Commonwealth has a long history. When the Pilgrims first arrived in Plymouth, they found the native population growing a harsh tobacco which was smoked in a pipe. The early settlers readily adopted this practice. However, King James I, an ardent opponent of smoking, urged the holders of the Bay Colony Charter to prohibit tobacco in the colony. In 1630, they wrote Governor Winthrop:

> "We specially desire you to take care that no tobacco be planted by any of the planters under your government, unless it be some small quantity for mere necessity, and for physic, and that the same be taken privately by ancient men and none other."

Upon this advice, the Massachusetts General Court banned public smoking in 1632 and, three years later, prohibited the retail sale of tobacco. However, the laws were found to be unenforceable and, in 1638, were repealed. President Dunster of Harvard University (1646-1654), also tried to limit tobacco use. During his term he issued the following edict:

> "No scholar shall take tobacco unless permitted by the President, with the consent of parents and on good reasons first given by a physician."

The golden age of tobacco for Massachusetts, however, began in 1762 when Lieutenant Colonel Israel Putnam of Connecticut brought cigars back with him from Cuba as "booty." Cigar smoking quickly became popular and, by the end of the Revolution, western Massachusetts was growing large quantities of leaf for cigar production. The Massachusetts tobacco harvest grew quickly and reached an all time high of 9.3 million pounds in 1865. An 1880 tobacco census reported that over 50 million cigars were produced by 271 factories in the state.

Little data exist on the amount of tobacco actually consumed in the state. An 1850 Marblehead study reported that 800,000 cigars, 14,000 pounds of chewing tobacco and 400 pounds of snuff were sold in that community, with a population of only 6,000. Males were the predominant users of tobacco. An exception to this

situation was the use of dry snuff, which was popular among the females who worked in the textile mills of Lawrence, Lowell, New Bedford and Fall River. The women would dip snuff orally to moisten their mouths while they worked in the dry and dusty cotton and woolen mills.

One of the first written warnings on the use of tobacco was made by Boston clergyman Cotton Mather. In 1726 he urged moderation in smoking in his famous book, Manductio Ad Ministerium. In 1837 the first reported case of cancer caused by tobacco use in the United States was made by Boston surgeon, John Collins Warren, son of the famous Revolutionary War hero. He also helped establish the New England Journal of Medicine and Surgery in 1812, which later become the New England Journal of Medicine. Dr. Warren excised a tongue tumor (without anesthesia!), from a Maine seaman who had a long history of chewing tobacco. Dr. Warren concluded in his case report:

> "The origin of this disease in this case may be traced pretty satisfactorily. The habitual application of the poisonous tobacco...."

Lemuel Shattuck, often referred to as the father of public health, did not discuss tobacco in his 1850 book, Report of the Sanitary Commission of Massachusetts. However, in a lecture on health to a Harvard freshman class, he argued that tobacco does have a sedative effect. He urged the students to put it in a bowl and take it as a decoction, thus, not injuring the health of one's neighbor. Dr. Henry I. Bowditch, the first Chairman of the Massachusetts Board of Health, 1869-1879, prophetically asserted that smoking caused heart disease.

The adverse health effects of environmental smoke were also reported. Thoreau justified his visits to Cape Cod as a way to leave behind the cigar smoke filled urban cities of Massachusetts. In 1874 the Massachusetts Institute of Technology (MIT), at the request of the State Board of Health, had Professor Nichols, a distinguished scientist, measure levels of carbonic acid, ammonia and other indoor air pollutants in the smoking car of the Boston to Providence

railroad. Professor Nichols warned that the gases emitted by tobacco smoke "...tend by their immediate putrefaction to produce directly poisonous effects upon the human system."

Boston was one of the first cities in the country to restrict public smoking. In 1818 public smoking was banned for fire safety reasons. However, the Act was never enforced and was repealed in 1880. In 1881 the Massachusetts legislature allowed women the right to vote on the education question and passed a law prohibiting smoking in polling places. The smoking prohibition was taken most likely to appease many of the suffragettes who opposed the practice.

There is even some evidence of early smoking cessation programs. In the 1880s, the Jordan Marsh Company of Boston, a large department store chain, offered employees lectures on the hazards of smoking. One lecture resulted in all but one of the clerks voting to stop smoking.

At the beginning of this century, the modern cigarette was introduced and widely promoted to young people. Legislation was filed to ban the newly invented cigarette in Massachusetts and 11 other states. Seven states actually succeeded. The action was fueled by high levels of cigarette smoking among young boys and driven by a vocal women's anti-smoking movement. In 1882, 75% of Boston schoolboys over age 12 were reported to smoke. Even in the prestigious Boston Latin School, half of the upper classmen lit up. Cigarettes replaced pipes and cigars, resulting in the eventual demise of the Massachusetts tobacco industry. By 1983, only 700,000 pounds of tobacco were grown on 44 Massachusetts farms, and no cigarettes were produced in the state.

In 1928, the Massachusetts Department of Public Health and the Harvard School of Public Health conducted the first epidemiological study on cancer in the state and found a significant association between heavy smoking and cancers of the oral cavity. The study examined 183 cancer cases, of which 35 were oropharyngeal tumors. The authors listed sites affected by smoking to include the lip, jaw,

cheek and tongue. The study chose as control cases (i.e., cancers not thought to be associated with smoking) cancers of the lung, throat, esophagus and neck. The authors may have done this because cigarette smoking was a new phenomenon and the type of tobacco used at that time was too harsh to inhale. In addition, lung cancer was a very rare disease and of an unknown etiology. Of the 183 cancers in the study, only five were lung cancers. Even so, the report failed to note that all five lung cancer cases were of heavy smokers. Regretfully, it wasn't until years later that the association between cigarette smoking and lung cancer was shown.

Richard D. Overholt, M.D., was one of the first surgeons to conduct open chest surgery. After graduate training and research in surgical methods of treating lung conditions in Philadelphia, he began a career in Boston in 1931 at the Deaconess and Baptist hospitals. At that time, the leading cause of lung death was tuberculosis. Overholt's first patients came from the Norfolk County Sanitarium, a public hospital for tuberculosis patients. His reputation spread, and he was asked to treat cases from other institutions. Overholt was astonished at the improved appearance and behavior of the lungs among Norfolk patients. He also found that patients from that facility had fewer post operative complications and deaths. He attributed this improvement to the smoking ban which was in force at the Norfolk sanitarium. A few years later, Overholt concluded from the smoking histories and appearances of the lung that cancer was caused by smoking. Shortly after World War II, Dr. Ernest Wynder one of the first American scientists to study smoking and lung cancer, included many of Overholt's cases in the first conclusive U.S. study linking smoking to lung cancer. Many of Overholt's colleagues in the teaching hospitals in Boston, some of whom later died from lung cancer, scoffed at his findings.

The prophetic warnings were ignored. Following World War II smoking rates surged in Massachusetts from 2,100 cigarette smoked per person per year to 3,200

by 1975. Rather than quiting, many smokers turned to filter cigarettes in the 1950s and low tar/low nicotine in the 1960s in the false belief that these modifications reduced health risks.

However, beginning in the late 1970s, an antismoking movement emerged in the state. Members of the movement advocated for city and town ordinances restricting smoking in public places. Newton was the first to do so in 1978 and by the late 1980s more than 50 other communities had taken action and in 1988, the Massachusetts legislature passed the states first comprehensive law restricting smoking in public places.

The state has a rich tobacco history filled with many interesting lessons. Perhaps President John Quincy Adams who admitted being "addicted" to tobacco in his youth summarized it best when, about his effort to quit he stated:

> "... the resolution was not carried out into execution without a struggle of vitiated nature."

B. Massachusetts Smoking Prevalence

The data presented in this and subsequent sections have been drawn from presentations made at a July 1987 Conference on Smoking and Health sponsored by the Massachusetts Department of Public Health and other health related organizations.

Massachusetts tobacco consumption practices have changed dramatically since the colonists first smoked tobacco in a pipe. The most dramatic change was the introduction of the cigarette. The modern cigarette, became available at the beginning of this century. According to national data, the average American smoked only two packs of cigarettes in 1905. According to state tax data, Massachusetts per capita sales for cigarettes reached 109 packs by 1950 and continued to increase, reaching an all time high, in 1963, of 142 packs per person per year. Consumption fluctuated until 1980, but has been declining since

then at a rate of 1.5% annually. Acoording to Table 1, a total of 114 packs was consumed per person per year in 1987, the lowest number on record since 1955.

Table 1. Trends in Massachusetts Cigarette Sales

Fiscal Year	Packs Sold (in millions)	Price Per Pack (cents)	Per Capita Consumption (packs)
1950	518.6	NA	109.2
1960	666.5	27.7	131.1
1970	679.8	34.6	124.1
1975	731.6	49.4	126.1
1980	695.3	68.2	120.5
1985	680.3	108.3	117.2
1986	674.4	115.0	115.8
1987	665.4	120.4	113.8
1988*	657.3	NA	112.4

*Projected, based on first 8 months.

In 1987, more than 1.4 billion cigarettes were consumed by 1.2 million Massachusetts citizens. The smoking prevalence rate (26.4%) among Massachusetts is equal to the national average (26.5%). Smoking by Massachusetts males is slightly below the rate reported nationally (26.4% vs. 29.5%), and slightly higher for Massachusetts females (26.3% vs. 23.8%).

Among younger age groups (18-24), smoking prevalence is substantially higher among the state's females (33.1%) than among males (27.8%). Among all age groups, males are more likely to have quit smoking (34.4%) than females (26.6%).

Based on these data, smoking prevalence among Massachusetts females should exceed that of males during the next decade.

More Massachusetts blacks, particularly males, smoke than whites. Smoking prevalence among Hispanic males is equal to that of whites and the female. Hispanic rate is sharply lower than that of white females. Massachusetts smoking prevalence is inversely proportional to income and educational level, with the highest smoking rates reported among low-income and less well-educated persons.

Table 2. Percentage of Current Cigarette Smoking Among Massachusetts Adults, by Age and Sex

Age	Men	Women	Total
18-24	27.8	33.1	30.5
25-34	26.3	30.8	28.6
35-44	31.8	23.1	27.6
45-54	24.3	35.3	30.0
55-64	33.2	25.9	29.3
65 +	13.2	14.0	13.7
All	26.4	26.3	26.4

Source: 1986 Health Interview Survey. Massachusetts Department of Public Health

Although there is evidence that smoking among adult males has declined during recent years, a 1987 national survey of adolescents found only a slight drop (66% vs. 68%) in lifetime cigarette use since 1984 among high school students. In the 1984 survey, 26.2% of all high school students surveyed reported smoking within the last week, a good indicator of a potential lifelong smoking habit. Girls were far more likely to smoke than boys (31.3% vs. 20.6%). Male adolescents, however, were 10 times more likely to report use of smokeless tobacco than females. Six percent of high school males reported using smokeless tobacco

"several times" or "very often" during the past year. High levels of experimentation were reported among 7th and 8th grade students (42.2% and 52.6%), and the proportion of weekly smokers progressed during the course of high school from 21.3% in the 9th grade to 28.6% in the 12th.

Table 3. Lifetime* and Current** Use of Cigarettes by Grade: Comparison of 1984 and 1987 Cross-Sectional Studies.

	Grade						
	6th	7th	8th	9th	10th	11th	12th
Cigarettes							
Lifetime							
1987	15.7	36.9	55.5	58.4	65.4	71.6	70.1
1984	--	48.3+		63.6	65.5	73.7	71.5
Current							
1987	7.1	11.6	15.6	32.1	28.4	34.8	31.4
1984	--	20.7		28.8	33.0	38.7	33.7
Smokeless Tobacco							
1984 Past Year		7.5	12.5	14.4	15.8	16.0	13.6

*Lifetime = ever used.
**Current = used in 30 days prior to survey.
+7th and 8th grades analyzed together.

Source: Cigarette Smoking Among Massachusetts Adolescents. Health and Addiction Research, Inc. Boston, Mass. 1988.

In summary, data show an overall decline in smoking in recent years, but, the decline is in large part due to smoking cessation among adult males. Smoking rates among Massachusetts females have declined only slightly. Of major concern is the high level of smoking among adolescent females, minorities, and persons of low-income, and the use of smokeless tobacco among young boys.

C. The Health Consequences of Tobacco Use

Tobacco use has been shown to be the leading cause of preventable death and disease in the country. Smoking accounts for a quarter of all heart attacks, and 90% of all lung cancers. It is also the major cause of emphysema and chronic bronchitis. Other health problems caused by smoking include stroke; peptic ulcer; upper respiratory infection; damage to the fetus and cancers of the mouth; esophagus; kidney; throat, bladder and pancreas. The use of smokeless tobacco has been shown to cause mouth cancer and gum recession. It also affects cardiovascular health and fetal health. According to Table 4, tobacco use causes more deaths than those caused by seven other causes including abuse of alcohol and other drugs.

Table 4. Massachusetts Resident Deaths 1985

Smoking Attributable	8,469
Alcohol (including cirrhosis)	992
Motor Vehicle Accident	813
Suicide	547
Homicide	220
Heroin	58
Cocaine	57
AIDS	56

Source: Massachusetts Department of Public Health Smoking Morbidity, Mortality Report, 1986. Mortality Data 1986.

Most of the 1.2 million Massachusetts residents who smoke would like to quit, and a high proportion has tried to do so. Quitting is difficult because smokers become dependent on the drug nicotine, the major addictive component of tobacco.

Nicotine is a prototypic drug of abuse that meets all of the criteria for an addictive drug. Nicotine affects the central nervous system, it serves as a biological reinforcer, and it can be used to affect mood and behavior. Repeated use can lead to tolerance and dependence. Once a dependence is established, it can be as difficult to quit smoking as it is to quit using other drugs such as alcohol, cocaine or morphine. The Surgeon General has determined that cigarette smoking is addictive.

Environmental tobacco smoke (ETS), also called secondhand smoke, is composed of the exhaled mainstream smoke and sidestream smoke produced by the burning ember of a lit cigarette. Exposure to secondhand smoke is common in the home, workplace and many other places. Breathing secondhand smoke can cause cancer, including lung cancer; respiratory disease, especially in children whose parents smoke and in persons with preexisting lung problems; allergies, and irritation of the eyes, nose, throat and airway. In the U.S., 60% of all homes are estimated to have at least one smoker. Children of smokers are twice as likely to suffer respiratory disease as are children of nonsmokers.

In 1985, 8,469 deaths occurred in Massachusetts from diseases caused by smoking. This number represents 15.2% of all 1985 Massachusetts deaths (55,900). Of the total of smoking attributable deaths, 5,315 occurred among males (62.7%) and 3,154 (37.3%) among females. This difference is due primarily to the high prevalence of smoking among adult males during the 1960s and 1970s (55%) and a relatively recent rise in smoking prevalence rates among females. It should be noted that lung cancers among women in Massachusetts have been increasing at a rate of 5% annually for the past three years. On the basis of a review of smoking prevalence among women, it is likely that any decline in male smoking-attributable mortality will be made up over time by increases in female smoking-attributable mortality.

Table 5. 1985 Massachusetts Smoking-Attributable Deaths, in Adults Ages 20+.

Diagnostic Group	Males	Both Sexes Females	Both Sexes Ages 20-64	Ages 65-
Lung Cancer	1589	489	744	1334
Other Neoplasms	520	269	253	536
Ischemic Heart Disease	1525	805	679	1651
Other Cardiovascular	569	926	191	1304
Respiratory	1066	625	238	1453
Tuberculosis	7	0	2	5
Ulcers	39	39	9	69
Column Total	5315	3154	2115	6354
Grand Total				8469

Source: Massachusetts Smoking Attributable Mortality, Morbidity and Economic Costs. Massachusetts Department of Public Health, 1988.

According to Table 5, two-thirds of all the smoking deaths were among persons over age 65, a reflection of the long exposure period to smoke that is usually necessary before disease and subsequent death occur. Of the total 2,868 cancers, lung cancers comprised 2,079 (72.5%). Smoking-related cancer deaths comprised 22% of cancer deaths in Massachusetts in 1985 (13,054). Of the total smoking deaths, cardiovascular disease accounted for the greatest number (2,955).

Pregnant women who smoke have been shown to have twice the incidence of low birth weight babies with an average weight 200g less than that of a baby of a nonsmoker. These babies are usually also sicker babies. Women who smoke are also at greater risk of delivering a premature baby as well as experiencing neonatal death. In 1985, 46 perinatal deaths, or 17.5% of all the state's perinatal deaths, were attributable to maternal smoking. The smoking burden is particularly heavy on low-income women. The Department of Public Health's Maternal and Infant Care program provides prenatal care for pregnant women under

19 years of age, and unmarried women, minorities, uninsured women and low-income women. A 1985 study found that 33% of the enrollees in this program smoked during pregnancy and that the smokers were 50% more likely to deliver a low birth weight baby than nonsmokers. Heavy smokers were twice as likely as nonsmokers to have their infants transferred to a neonatal intensive care unit.

Massachusetts data on smoking attributable disease among minorities are not available. National data show that approximately 25% of all deaths from heart attack are caused by smoking as are 85% of lung cancer deaths. National data also show black males have a 58% higher incidence of lung cancer and 20% higher incidence of mortality from coronary disease. Blacks have a six year shorter life expectancy than whites. Heart disease and cancer are by far the largest contributing factors to the excess mortality.

An additional concern about smoking is the fact that fires caused by a burning cigarette claimed 21 deaths in 1985. This makes the cigarette the leading cause of death from structural fire for that year.

Premature death from smoking-induced diseases resulted in 87,073 years of productive life lost in Massachusetts for 1985 and countless lost hours of worker productivity were attributed to smoking-related disability.

The data clearly show smoking to be the leading cause of preventable death and disease in Massachusetts.

D. The Economic Consequences of Tobacco Use

The introduction of the modern cigarette resulted in the concentration of tobacco agriculture and manufacture to a limited number of states and the demise of the Massachusetts tobacco industry. No cigarettes are produced in the state today. The Tobacco Institute estimates that 7,500 state residents are directly

employed in the sale of cigarettes or in industries that support the manufacture of cigarettes. Their annual earnings are estimated to be $66 million.

Table 6. State Excise Taxes and Cigarette Prices

Fiscal Year	Tax Per Pack (cents)	Gross Tax Income (millions)	CPI	Tax Value In 1970 (cents)	Percent State Tax Of Retail Price	Percent Cigarette Tax Of All State Revenue
1970	12	81.6	40.2	12.0	38.0	6.2
1976	21	143.1	60.0	14.1	42.5	5.5
1984	26	173.4	104.7	10.0	30.8	3.2
1987	26	173.0	117.1	8.9	24.9	2.1

*CPI - Consumer Price Index
Sources: Massachusetts Department of Revenue; U.S. Bureau of Labor Statistics; Tax Burden on Tobacco, The United States, 1987.

According to Table 6, the sale and taxation of cigarettes have a sizeable impact on the state's budget, generating $173 million in state excise taxes in 1987. However, this number has declined from 6.2% in 1970 to 2.1% of all tax revenue for fiscal year 1987. Tax laws have recently been amended to include cigarettes within the Massachusetts sales tax. The law should produce an additional $44 million in revenue in 1989.

In 1987, an estimated 1.2 million people purchased 13.4 billion cigarettes at a cost of $750 million. Most of this money went to six major tobacco companies not located in Massachusetts, with a resultant loss of consumer resources to purchase a nonessential, harmful item.

Table 7. Smoking Attributable Direct Health Care Costs for Massachusetts for 1985

Service Area	All Costs (in millions)	Smoking Attributable (in millions)
Hospital Care	$ 1,682.8	$ 597.2
Physician services	$ 702.0	$ 93.6
Nursing home care	$ 436.6	$ 111.0
Drugs	$ 291.2	$ 36.1
Professional services	$ 37.2	$ 9.6
Total	$ 3,149.9	$ 848.8

Source: Massachusetts Smoking-Attributable Mortality, Morbidity and Economic Costs in 1985, Massachusetts Department of Public Health, 1988.

Smoking-induced diseases place an extremely heavy burden on the state's economy (Table 7). In 1985, an estimated $849 million was spent for direct health care costs for treatment of smoking-attributable diseases. This figure represents 35% of all Massachusetts hospital and 25% of all nursing home expenditures. These costs burden state health care expenditures, and increase the cost of new initiatives to provide health insurance for noninsured people. Based on national estimates, actuarially sound health insurance premiums for smokers are $300 more than those for nonsmokers.

Massachusetts smokers are more likely to die prematurely or to be disabled from smoking-attributable diseases than nonsmokers, thus placing a further burden on the economy especially because the state has a low unemployment rate. The value of lost wages because of premature death among smokers is estimated to be $462 million for 1985 (Table 8). The lose due to morbidity is estimated to be $288 million. Overall, tobacco use represents an enormous drain of $1.6 billion annually on the state's economy.

Table 8. Massachusetts Smoking-Attributable Costs 1985.

	Direct Health (Millions)	Indirect Mortality (Millions)	Indirect Morbidity (Millions)	Total
Age				
20+	$ 847.5	$ 462.0	$ 288.4	$ 1,597.9
20-65	513.8	395.1	274.5	1,183.4
65+	333.7	66.9	13.9	414.5

Source: Massachusetts Smoking-Attributable Mortality, Morbidity and Economic Costs in 1985, Massachusetts Department of Public Health, 1988.

E. Tobacco Marketing

Among the number of reasons that a harmful product like cigarettes is so popular is due to the aggressive marketing by cigarette companies. Tobacco manufacturers heavily promote and advertise cigarettes to recruit new smokers to replace persons who have quit or died from disease, to encourage brand switching, to discourage current smokers from stopping, and to encourage former smokers to return to the practice.

Cigarette advertising is used to link images of success, sex, youthful activity and health with smoking. Slogans such as, "You've come a long way baby," portray smoking by women as a form of female liberation. Brand imagery promotes thinness and glamour. Marketing is also being targeted to blacks and Hispanics, and smokeless tobacco products have been heavily promoted among adolescent males. Designer cigarettes such as "Yves Saint Laurent" and "Ritz" stress themes of fashion, style, and monetary success. Other themes such as "independence," "rebellion," and "machoism" are reflected in the Camel Man who is atop a mountain peak, the young motorcyclist smoking a Kool cigarette or the

Marlboro Man riding on the high plains. Such themes appeal to young people and undermine public health efforts to inform Massachusetts children about the dangers of smoking.

Public concern about the health effects of smoking has resulted in the introduction of new variations of cigarettes such as the filtered cigarette, or low-tar, low-nicotine brands. These products have entered the marketplace without having been tested for safety and efficacy, and have been indirectly marketed as safe alternatives to products in current use.

Table 9. Estimated Massachusetts Cigarette Advertising and Promotion

Year	Advertising (thousands)	Promotion (thousands)	Total (thousands)
1970	$ 7,547	$ 1,640	$ 9,188
1975	8,025	3,891	11,916
1980	17,489	10,010	27,499
1985	20,963	34,991	55,954

Source: Popper, ET: Environmental Influences on Smoking in Massachusetts 1987. Massachusetts Department of Public Health.

On the basis of national figures, it is estimated that in excess of $55 million dollars is spent each year marketing tobacco in Massachusetts. Of this amount, $17 million is spent in newspapers and magazine advertisements, and $7 million in outdoor advertising. This amount represents almost $10 of cigarette advertising for every man, women, and child in the state.

Since the late 1970s (when television advertising for cigarettes was banned) there has been a sharp increase in cigarette advertising and promotion in the state (Table 9). This increase is far greater than the expected inflationary rate, and, in recent years, has been directed to product promotions which includes free sampling, event sponsorship and other activities. At least one

smokeless tobacco manufacturer has operated a marketing program on Massachusetts college campuses, while cigarette companies routinely sponsors music concerts on the South Shore and women's tennis tournaments in Worcester.

Unlike alcohol or other dependence producing substances whose access is strictly regulated, tobacco products are widely available in the state, sold in 20,000 retail outlets and 15,000 vending machines. Of major concern is the easy access to tobacco by minors. The state law prohibiting sale of cigarettes to minors has not been enforced. A 1986 study found that an 11-year-old Massachusetts girl successfully purchased cigarettes in 75 out of 100 attempts. In response to this finding, the Massachusetts Department of Public Health promulgated regulations effective September, 1988, to strengthen enforcement.

The cigarette is the most heavily advertised consumer product in Massachusetts. Of major concern is the targeting of females, minorities, and young people. The advertising is misleading. It encourages young people to smoke and current smokers to continue, while discouraging smokers from quitting.

F. Activities to Curb Tobacco Use

Thirty years ago, smoking was a socially accepted practice and public concern about its dangers was minimal. This situation has changed dramatically. The 1986 Massachusetts Health Interview Survey conducted by the Massachusetts Department of Public Health found that respondents listed smoking as the leading cause of cancer and heart disease. National surveys have found that more than 90% of smokers wish to quit and the majority has tried to quit one or more times. A 1986 national survey found that 88% of the respondents felt environmental tobacco smoke to be harmful. Among those who were employed, 42% reported restrictions in their workplace, 3% a total ban and 55%, no

restrictions. The Massachusetts 1986 Health Survey found that 66% of the respondents favored restricting smoking in the workplace while 21% favored a total ban on smoking and 67% favored no smoking sections in restaurants. A 1986 survey of the American Society for Personnel Administration reported that 36% of their work stations had restrictive smoking policies. Fifty-three percent of the respondents felt that they were exposed to tobacco smoke at work and, of all respondents, 67% favored restricting smoking in the workplace.

Public, private and voluntary agencies are conducting a number of educational, programmatic and regulatory activities to curb smoking. Activities fall into three general areas: preventing smoking by children and adolescents, helping adults to quit, and protecting the health of nonsmokers from environmental tobacco smoke.

Many school systems in the state have smoking prevention materials included in their curriculum, but they vary from school system to system. The American Heart Association (AHA), American Lung Association (ALA) and American Cancer Society (ACS) have curricula available that are in use in various school systems. These three voluntary agencies, under the umbrella of the Coalition for a Smoke Free Massachusetts by the Year 2000, are sponsoring a project entitled, "Smoke Free Class of the Year 2000" which provides educational materials to schools. The Massachusetts Department of Public Health and voluntary agencies have also carried out public education campaigns that use the mass media including television and radio public service announcements, press releases, posters and pamphlets.

State law prohibits sale of tobacco products to persons under 18 years of age, but it is rarely enforced. Regulations have been promulgated which require that graphic posters be placed at point of purchase informing the public that

sale of tobacco to minors is illegal as mentioned earlier. Legislation was filed in 1988 to strengthen the enforcement provisions of the law. In 1987, a state law was passed prohibiting students from smoking during school hours.

According to national data, the vast majority of smokers quit on their own. However, smoking cessation programs do play an important role. A number of such programs are operated in Massachusetts by voluntary, for-profit and health agencies. The state's ACS, AHA and ALA operate self-help and group smoking cessation programs. A number of hospital-based programs offer smoking cessation clinics that use a variety of methods including behavior modification, hypnosis and acupuncture. The exact number and use of smoking cessation programs in Massachusetts is not known nor is their utilization or effectiveness. A number of studies indicate that physician counseling is effective in helping people quit. However, Massachusetts insurance carriers do not routinely cover this service. The Massachusetts Health Survey found that 55% of smokers surveyed said they had never been advised by their physician to quit or to cut down on smoking.

Considerable progress has been made in recent years in protecting the health of Massachusetts nonsmokers. In 1987, the Massachusetts Legislature passed the Clean Indoor Air Act, which restricts smoking in a variety of public places including schools, state and local office buildings, restaurants of 75 or more seats, nursing homes and transportation waiting areas and prohibits smoking in buses and trains and retail food establishments. Another law passed in 1987 prohibits smoking by students effective September 1989. Federal law and regulations prohibit smoking on airline flights of less than two hours and restricts smoking in federal buildings. Fifty-four cities and towns in Massachusetts have passed regulations or by-laws restricting smoking in restaurants and seven communities restrict smoking in the private workplace. A

-few local school committees have prohibited smoking in schools. Many Massachusetts businesses have voluntarily adopted policies to restrict smoking and some have banned smoking entirely. Nationally, 36% of a random sample of personnel administrators report smoking restrictions in their workplace. However, the Massachusetts legislature has yet to enact legislation restricting smoking in the workplace making Massachusetts the only New England State not to have such a law.

II. A Tobacco-Free Massachusetts

A. Objectives

1. By the year 2000, more than 90% of Massachusetts adults and adolescents will be nonusers of tobacco.

- By the year 1995, more than 90% of all females of childbearing age will be nonusers of tobacco
- By the year 1995, more than 85% of low income adults will be nonusers of tobacco.
- By the year 1995, less than 5% of adults will be heavy smokers.

2. By the year 2000, all Massachusetts nonsmokers will be able in the course of their normal daily activities to breathe air that is free of environmental tobacco smoke.

- By the year 1995, all Massachusetts schools, public places and health care facilities will be smoke free.
- By the year 1995, all Massachusetts businesses will be smoke free except for designated areas.

B. Approaching the Problem

In 1987 the Massachusetts Department of Public Health invited the many groups that had worked independently on the smoking problem to jointly develop a plan for nonsmoking and health for the state. The intent of the plan is to establish common goals, objectives and strategies for achieving a tobacco-free society. A planning committee was formed and chose three areas of action: the prevention of adolescent tobacco use; cessation of adult smoking; and protection of the health of nonsmokers from the adverse effects of tobacco smoke. Following a conference in July of 1987 at which papers were presented which are summarized in the first section of the report, subcommittees were established for each specific area. The following plan is the culmination of their work. The committees began work by developing a common set of principles to guide the state in developing a nonsmoking and health initiative. They are:

First, the development and implementation of any strategy, whether focused on preventing young people from smoking, helping adults to quit smoking or

protecting the nonsmoker, must involve the community and reflect the geographical, cultural and economic realities of the community in which a program is located.

Second, smoking must be viewed as a social and political problem as well as a health problem. Success in achieving the goals set forth in this plan demands the involvement of the political sector.

Third, any plan must be realistic in expectations about what can be accomplished and how long it will take to reach the goal. Smoking behaviors cannot be altered overnight. General cessation trends in certain sectors of the population are very encouraging, but a smoke-free society will be achieved gradually.

Fourth, emphasis must be placed on involving the private sector, businesses and corporations, as well as traditional voluntary groups, in the achievement of the goals and objectives set forth in this plan.

Fifth, family and community involvement in the reduction of numbers of new smokers should be encouraged. For some, especially younger children and adolescents, parental and sibling influences will continue to be important, even as friends take on increased social significance. In addition, changes in parental smoking and in the larger society's non-acceptance of smoking may amplify the effect of any other preventive efforts directed at young people. Parental involvement will increase the educational significance of the program. The action and example of citizens to make public smoking less acceptable will add further supportive role models.

Sixth, the state must make every effort to involve health, education and allied professionals in its plans to create a smoke-free environment. These efforts should take the form of educating, training and sensitizing not only

practicing health and education professionals but professionals in training as well. Above all, the state itself should be an examplar and play a leadership role in implementing a tobacco-control program.

C. Prevention of Tobacco Use

The prevention of smoking by eliminating the initial development of tobacco use or cutting short its development represents an important strategy in any smoke-free plan. The reduction in the numbers of new smokers can include both prevention of initial uptake among young people and intervention in their early stages of smoking.

Young females appear at special risk for smoking, prevalence rates being 50% higher than for young males. On the other hand, young males are more likely to use smokeless tobacco. Youth at risk for other problem behaviors, such as drug use and early sexual experimentation, are also at risk for tobacco use. The efforts to integrate these youths into the existing social service and preventive programs now serving adolescents should be reviewed and tobacco education included wherever possible.

The state data on racial differences are based on very small samples, and thus, special risk is not established among these subgroups of young people. With or without evidence of any differences in risk between racial and ethnic groups, we advocate sensitivity to cultural differences likely to make prevention efforts more or less successful with different subgroups. This approach applies equally to curriculum and media.

Recommendations for prevention are made in the context of the statistics currently available for the state and, in the absence of state-based data, from what we know about national trends in adolescent smoking. Ongoing monitoring of rates of smoking among Massachusetts adolescents will be an important component for evaluation and modification of recommended prevention initiatives.

D. Helping Tobacco Users to Quit

The prevention of smoking must be the principal goal of the state in seeking to achieve a smoke-free society. The state, however, must not ignore the fact that the prevalence of smoking among both men and women in the Commonwealth is still more than 26%.

Achievement of the overall goal of a reduction in the use of tobacco products is dependent on the coordination of many different initiatives. In order to create a nonsmoking environment in the Commonwealth, the following societal changes are needed:

- Decrease social acceptability of tobacco use and increase social support for cessation.
- Increase the visibility of tobacco as a public health problem.
- Increase the resources allocated to the control of tobacco use.
- Increase development and implementation of, and compliance with, policies restricting smoking in public places.
- Increase availability, use and effectiveness of public education and professional training programs.

As a general principle, every Massachusetts resident should have access to information and/or services that will assist him or her not to smoke. The Massachusetts Department of Public Health should join with others in both the private and voluntary sectors to ensure that all smokers who want it, are given whatever information and assistance may be required to help them abandon the use of tobacco products. At the same time, we also recognize that there are certain subgroups of the population for whom the cessation of smoking is a particularly urgent matter. We have identified these high priority groups in the goal.

The period in and around the birth of a child is an important life experience for mother and father alike and, therefore, presents a time when women of child-bearing age are perhaps most susceptible to changes in their smoking behavior.

The fact that pregnant women who do smoke will quit or alter their smoking behavior has been demonstrated. Unfortunately, all too often they return to smoking after the birth of their child. A new effort must be made to support the women who are successful in abstinence to remain nonsmokers.

The prevalence of tobacco use is inversely related to income and educational level. Of particular significance is the fact that many low-income people hold jobs or have occupations that place them at higher risk of developing smoking-related diseases and illnesses. Because these same populations may have difficulty gaining access to health care and related services, it is even more imperative that they be reached and encouraged to alter their use of tobacco products.

Because heavy smokers (persons consuming more than two packs a day) are likely to be older, they are also more likely to have multiple chronic conditions for which smoking represents another major risk factor. For these reasons, efforts must continue to reach this important subgroup of the smoking public.

E. Protecting the Health of the Nonsmoker

Public concern about inadvertent and unwanted exposure to tobacco smoke has reached the point that many, if not most, nonsmokers are becoming outspoken in their desire to escape from smoke exposure in public places in the course of ordinary daily activities. Recent data that suggest adverse health effects from passive smoking inhalation among children, adults, and workers in factories confirmed what people had intuitively known, that tobacco smoke is unpleasant at the very least and dangerous at worst. The right to breathe clean air in the process of normal daily activities is unquestioned now. Therefore, an era of significant restriction on the behavior of smokers in the population has arrived. It is important to deal with this problem in a method that is viewed as fair and equitable by both smokers and nonsmokers. State and national surveys have indicated that the overwhelming majority of nonsmokers and even the large

majority of smokers agree with the concept that it is reasonable to place restrictions on public smoking to avoid harming or annoying other people.

The truly great strides that have been made over the past decade in attitudes towards the uses of tobacco lead one to conclude that in the future tobacco smoking, like alcohol consumption, will be limited to private environments. It is imperative that any comprehensive plan for controlling the use of tobacco begin with our schools, including preschools, so that children may grow up understanding the health advantages of limited exposure to contaminants from tobacco smoke. These efforts should continue through high school and college and, in particular, should apply to the mentors and models for our children as they grow, that is, the teachers and other staff in the school environment. Public transportation, public spaces, common working areas, stores, shops, hospitals and other places of business should be free of tobacco smoke to protect the vast majority of people who find tobacco smoke unpleasant and potentially hazardous.

F. Recommended Actions

Historically, tobacco has been exempted from federal and state health and safety laws that reduce risks associated with exposure to other environmental hazards. Instead, Congress has chosen to restrict tobacco advertising and require health warning labels on packages and print ads. States have been preempted from further restrictions on advertising for health reasons. The widespread use of tobacco and the economic and political influence of the tobacco industry are major reasons for this weak approach. In addition, this policy is supported by the popular misconception that tobacco users freely choose to smoke and that they alone suffer the consequences of that decision. Finally, many policy makers see quitting smoking, as a personal matter in which government has no responsibility to be involved.

This section presents recommended actions to achieve the overall goal of a tobacco free state. They fall into three areas: education/evaluation, regulation/ legislation and research/education. A subcommittee on each area developed its own set of recommendations, which are presented in an intergrated form by categories of action.

Education/Information

1. A full range of tested smoking prevention materials should be readily available, and actively promoted, for use by schools and other community agencies.

Through direct collaboration or other cooperative arrangements, the Massachusetts Department of Public Health and the Massachusetts Department of Education should augment the materials and services currently available from the clearinghouse of the Coalition for a Smoke-Free Massachusetts by the Year 2000.

New resources, including some that are not conventional "curriculum" materials, (e.g., carbon monoxide monitors) should be added to clearinghouse resources. In addition, there could be "brokering" through the Coalition to regional and national resources, such as the Northeast Regional Office of the Diffusion Network of the National Institute of Education.

2. Recommended packages of smoking prevention curricula should be developed, and actively promoted among schools and other agencies.

These recommended packages should be cast in a flexible format (i.e., with varying time demands, and either within the context of general health education or not) so that schools are able to adopt them according to their needs. The Department of Public Health and Department of Education should convene a group to make

recommendations for curricula packages. Wherever possible, existing resources should be used as the first step in this review.

Cooperative arrangements with the Prevention Services of the Massachusetts Department of Public Health's Division of Alcoholism and Drug Rehabilitation and the Governor's Alliance on Drug and Alcohol Abuse are urged to integrate tobacco education into all state or federally funded drug education programs offered to youth.

3. The Massachusetts Department of Public Health, in collaboration with other agencies, should provide training in tobacco and health education to teachers and other health professionals who work with youth. Active partnerships with the state's school committee, administrative, medical and educational organizations should be promoted to do this.

Promotion of opportunities for training of teachers and health professionals in tobacco and health education should include use of the state's Commonwealth Institute and its minigrant program. Funding pilot project in existing agencies should be considered. Training should include current socioemotional-based approaches to smoking prevention. Training programs and resources for dentists, pediatricians and other health care providers who have frequent contact with youth should also be systematically developed and made available through continuing education programs.

The state's school committees, administrative, medical and educational organizations could be valued partners in efforts to reduce tobacco use among young people.

4. The Massachusetts Department of Public Health should establish a mass media campaign with the goal of reducing tobacco use among young people.

Media approaches can reinforce the messages of any curriculum to which school students are exposed, in addition to reaching younger

children and adolescents who are not in school. Additional parental and community support for smoking prevention can also be engendered through a media campaign. These media efforts should not be restricted to education about health effects, but rather should incorporate appeals to young people's more immediate and emotional concerns (e.g., social acceptability, attractiveness, short-term aesthetic effects). A mobilizing slogan, with logo, poster and varied prevention activities, creating further impact through its familiarity and recognizability, should be developed. The competition and development of a slogan and campaign theme should be complete by 1990.

5. Nonsmokers should be educated about the adverse health effects of environmental tobacco.

A mass media program should be instituted that informs nonsmokers of the health dangers of secondhand smoke, and their rights under the law to be protected. The posting requirements of the Clean Indoor Air Act should be specified and strictly enforced.

A coalition of Massachusetts women's health, social and political organizations should be developed and coordinated with the prevention efforts of the Department.

Smoking among women has important consequences not only for the females who smoke, but for the children they have or will have. The fact that the prevalence of smoking among young women has not declined, but rather, has increased is cause for special concern. Special educational programs designed to reach all women of childbearing age should be encouraged and implemented.

Program Activities

6. Cessation resources should be developed to promote and aid cessation among young people in the early stages of tobacco use and be available in schools.

"Prevention" of smoking is broadly construed as the reduction of numbers of young people who become new regular tobacco users. Although primary prevention that results in the elimination of any experimentation with tobacco represents an ideal, it cannot be expected to be 100% successful. Therefore, preventive efforts should be targeted at all developmental phases of young people's smoking and smokeless tobacco use. Funds are needed to develop appropriate cessation programs for youth.

7. The Massachusetts Department of Public Health should aggressively promote smoking cessation by offering counseling and cessation maintenance for all employees and persons who are served by state programs including Department of Public Welfare's Medicaid; Women, Infants and Children (WIC), and the Department of Public Health Family Health Services.

In fiscal year 1988, state employees were offered smoking cessation as a covered benefit. The Department of Public Health in collaboration with the Massachusetts Lung Association implemented a new initiative to curb smoking among females enrolled in Healthy Start and the WIC program. These initiatives could be easily expanded for a nominal cost.

8. The Massachusetts Department of Public Health should encourage all physicians, dentists, nurses and other health care professionals to include smoking cessation counseling in their primary health care services. Women of child bearing age and heavy smokers should be targeted.

The Massachusetts Department of Public Health should work with the deans of the health professional schools in Massachusetts to ensure that the curriculum includes tobacco use and abuse, and should support continuing education opportunities for health care professionals and disseminate educational materials to them.

9. The Massachusetts Department of Public Health, in collaboration with the state's voluntary health agencies, should assist businesses in Massachusetts to implement smoking cessation programs for the employees.

Many private businesses are adopting policies restricting smoking in workplaces. State and local municipal agencies are required to do so under the new Clean Indoor Air Act. Implementation of such policies provides an excellent opportunity for offering smoking cessation programs.

10. Specific cessation programs should be developed for pregnant females, minorities and heavy smokers.

Although a smaller proportion of women smoke than men, smoking rates are actually increasing among women in certain age groups such as those 20-24 years old. Of added concern is the fact that the intensity of smoking, e.g., number of cigarettes smoked per day, seems to be increasing among both men and women. The per capita cigarette consumption among those who continue to smoke has actually increased in the last 20 years.

Smoking cessation efforts in the past have been directed at English speaking, white, middle-class, literate smokers, and have not paid attention to persons who may be linguistically distinct or separated from the mainstream of society by economic, cultural and racial barriers. Efforts must be made to reach this important subgroup.

Legislation/Regulation

11. Laws prohibiting tobacco sales to minors should be strengthened, including the enforcement provisions of such laws, and regulations regarding sale of tobacco through vending machines promulgated.

The Massachusetts Department of Public Health and the Massachusetts Department of Revenue should promulgate regulations for the enforcement of existing laws regarding the sale of cigarettes to minors. Local boards of health also could be involved in this enforcement. The role of law enforcement agents should be clarified.

A more comprehensive approach could restrict the sale of cigarettes to only establishments licensed to sell alcohol, with the legal age for purchase of cigarettes and other tobacco products raised to 21.

12. The Massachusetts Legislature should enact legislation prohibiting tobacco promotion and advertising generated within Massachusetts. In particular the law should prohibit free distribution of tobacco, event sponsorship and billboard advertising.

Some forms of tobacco promotion, such as free samples, increase the likelihood of access to tobacco by underage youths. Other forms of advertising increase the number of societal models supporting smoking behavior.

13. The Massachusetts Legislature should enact legislation that prohibits tobacco use by all persons (students, staff and visitors) in all public and private schools, on school grounds, and at school-sponsored events.

Current law prohibits smoking by public school students as of September, 1989. Staff and visitors are still allowed to smoke in designated areas. More comprehensive legislation should be passed by 1992 assuring that all schools are tobacco free. All of the state's

schools should move in the interim to adopt tobacco usage policies. In compliance with the new state law, all institutionally-sanctioned smoking "privileges" for public school students should be eliminated by September, 1989. Smoking by faculty and staff should, at minimum, be sufficiently restricted so that a smoke-free environment is available for all staff.

14. Existing laws and regulations restricting smoking in schools, health care facilities, businesses and other public places should gradually be strengthened.

The Legislature has taken an important first step by passing the Clean Indoor Air Act. However, the Act sets minimum standards and specifically states that other state agencies or municipalities can further restrict smoking.

15. All Massachusetts businesses should be nonsmoking or have policies restricting smoking to designated areas that are physically separate from work areas and common spaces.

16. All Massachusetts health care facilities should be smoke-free. Public places, including governmental buildings, restaurants, retail businesses, transportation waiting areas and sports facilities, should be smoke-free except for designated smoking areas that are physically separate.

17. All new forms of manufactured tobacco or tobacco-like devices such as the "smokeless cigarette" should be subject to the same health and consumer safety laws that apply to all other products and prohibited from sale if they fail to meet standards for health and safety.

Research and Surveillance

The Commonwealth benefits from research done at the federal government and by local research institutions on the health effects of smoking and exposure to secondhand smoke. There is little need for the state to involve itself in that type of research. However, it is highly appropriate for the Massachusetts Department of Public Health to monitor the effect that tobacco use has on the health of the states' citizens and economy.

18. Adoption of smoking control strategies should be monitored to ensure that the individuals and agencies that have responsibilities for addressing the tobacco problem are carrying out their responsibilities.

19. The prevalence of tobacco use among adolescents and adults should be monitored at a minimum of every three years.

20. Reports on smoking-attributable morbidity, mortality and economic consequences should be updated every two years, possibly adopted for the use by local communities.

Surveys should be compatible with other state or national surveys. Monitoring trends of tobacco use among adolescents and adults in the state should be continued. Up-to-date and consistently collected data on trends in tobacco use are critical in assessing the success of any intervention.

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